



# Frito-Lay Zero and Near-Zero Emission Project: Modesto, CA

The San Joaquin Valley Air Pollution Control District has partnered with Frito-Lay, a division of PepsiCo, to implement the “Frito-Lay Zero and Near-Zero Emission Project” in Modesto, California; a bold and transformative effort that will yield a world-renowned showcase for economically and environmentally sustainable manufacturing, warehousing, and distribution.

This project aims to completely replace the use of all diesel-powered freight equipment within one of Frito-Lay’s largest food production, warehouse and regional distribution facilities. This will be accomplished via the use of zero-emission (ZE) technology everywhere feasible, and near-zero emissions (NZE) technology and renewable fuels everywhere else.



The project will integrate an incredible array of commercially available and pre-commercial ZE and NZE technologies in a number of applications. In addition to the fleet assets, on-site renewable energy generation (solar PV) and energy storage systems will be installed to better serve the energy needs of the manufacturing facility and warehouses.

**Dates:** 2019 – Spring 2021  
**Grantee:** San Joaquin Valley APCD  
**Partners:** Frito-Lay, American Natural Gas, CALSTART, Project Clean Air, Café Coop, Tesla, BYD, Peterbilt, Meritor, Volvo, Gladstein, Neandross & Associates

**Grant Amount:**  
 CARB Contribution: \$15,382,243  
 Matching Funds: \$15,382,244  
 Project Total: \$30,764,487



## Vehicles/Equipment Funded

- Vehicles:
- Fifteen (15) Tesla heavy-duty battery electric tractors
  - Six (6) Peterbilt 220e battery electric trucks
  - Three (3) BYD battery electric yard trucks
  - Twelve (12) BYD Lithium-Ion battery electric forklifts
  - Thirty Eight (38) Volvo VNL tractors with ISX12N low-NOx engine

- Equipment:
- Compressed natural gas fueling station providing renewable fuel
  - 1 MW photovoltaic array with energy storage
  - Truck charging systems and energy storage for battery electric vehicles

## Lessons Learned

- Start project planning as early as possible, with thoughtful consideration given to every project element.
- Assemble a project team with a diverse set of perspectives and expertise to ensure success.
- Communicate with project partners early and often to keep the project focused and on schedule.

## Status Updates

- Project kickoff is anticipated for April 2019.
- Initial work will focus on infrastructure to support vehicle deployments.
- Project completion anticipated for early 2021.



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